REMARKS

Claims 1-50 are pending in this application. Claims 1, 31, 39, 44 and 49 are independent claims.

Reconsideration in view of the following remarks is respectfully solicited.

Personal Interview

Applicants wish to thank Examiner Khai Tran for the courtesies extended to Applicants' representative, Carolyn Baumgardner, during the December 13, 2005 Personal Interview. During the interview, the differences between the claimed invention and the Saito and APA references was discussed.

Following the Personal Interview, **the Examiner agreed to withdraw the Final Office Action** and further search will be made. (see Interview Summary; Paper No. 20051312)

Further substance of the Personal Interview is summarized in the following remarks.

Allowable Subject Matter

Applicants gratefully acknowledge the Examiner's indication of allowable subject matter in **claims 39-50** over the art of record. The Office Action also indicates that **claims 3-30, 32, 33 and 35-38** are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

However, applicants respectfully submit that all of claims 1-50 are allowable, for at least the reasons set forth below.

Furthermore, applicants respectfully point out that in the Examiner's Reasons for Allowance, the Examiner notes features that are not recited in each of the allowable claims. As such, applicants respectfully note that the claimed invention is allowable for the features contained therein.

The Claims Define Patentable Subject Matter

The Office Action makes the following rejections:

(1) claims 1, 2, 31 and 34 are rejected under 35 U.S.C. §103(a) as being unpatentable over admitted prior art (pages 1-9 of present specification) (hereafter APA) in view of U.S. Patent No. 5,081,653 to Saito (hereafter Saito).

This rejection is respectfully traversed.

Applicants respectfully submit that the combination of APA and Saito fails to teach or suggest each and every feature as set forth in the claimed invention.

For example, claim 1 recites, *inter alia,* detecting, based on the received signal and the carrier detection level, group of pulses having a carrier frequency to be detected. In claim 1, an integrator outputs a resultant of the integration as the carrier detection level.

The Examiner improperly alleges that the above noted feature of claim 1 is disclosed by element 9 in Figure 14 of the APA which is described in the present specification (element 9 corresponds to the integration circuit (22) in Fig. 16. See present specification, page 5, 1st paragraph).

However, the cited element 9 fails to correspond to the claimed integrator. For example, the integration circuit (9,22) in APA merely corresponds to element 132 of Fig. 2, as described on page 17, 3rd paragraph of the present specification.

On the other hand, the claimed integrator is, for example, shown in Figure 2 as element 134. Such an integrator of claim 1 is distinguishable from the integration circuit (9,22) in APA for at least the following reasons:

Claim 1 recites, *inter alia,* an integrator for outputting the carrier detection level. Claim 1 also recites a detector for detecting groups of pulses based on this carrier detection level. However, the output of the integration circuit (9,22) in APA fails to correspond to the claimed

carrier detection level at least because the output of the integration circuit (9,22) fails to be used by the detector to detect groups of pulses.

Applicants respectfully submit that at least because the integration circuit (9,22) in APA fails to output the carrier detection level, whereas the integrator of applicant's claim 1 does indeed output the carrier detection level, the integrator of claim 1 is quite distinguishable over the integration circuit in APA. Furthermore, the teachings in Saito fail to make up for the deficiencies noted in APA.

Furthermore, the claimed integrator outputs the carrier detection level, which is used by the detector (i.e., ...a detector for detecting, based on the received signal and the carrier detection level). As noted above, the Examiner alleges that the claimed integrator is met by the integration circuit 9 of APA (see Fig. 14). However, applicant respectfully points out that the integration circuit 9 of APA fails to output the carrier detection level (to be used by the detector, which the Examiner corresponds with detection circuit 8).

As can be seen in Fig. 16 and as disclosed on page 3, lines 17-21 and page 5, lines 1-8, there fails to be any teaching of a signal being supplied from the integrator circuit 9 to the detection circuit 8. Therefore, in APA there fails to be any signal corresponding to the claimed carrier detection level, which is output by the integrator and used by the detector.

Similarly, the integrator 5 of Saito also fails to supply a carrier detection level to the carrier detector 6 (which the Examiner corresponds with the claimed detector). As such, Saito fails to make up for the deficiencies found in APA.

Furthermore, the Examiner concedes that APA fails to disclose that the detector is being used to detect groups of pulses, as claimed. (see final Office Action, page 2). In an attempt to show this feature, the Examiner imports Saito.

Specifically, the Examiner alleges that Saito discloses a carrier detector (6) for producing a signal indicative of bit clock pulses and the Examiner directs our attention to Saito, col. 3, lines 10-38. As such, the Examiner alleges that it would have been obvious to combine APA with Saito because it would make it capable to accurately identify multilevel modulated signals.

In response to our previous arguments, the Examiner merely notes that Saito discloses the clock regenerator 8 and the carrier detector 6 [sic] respectively produce a signal indicative of bit clock pulses. (see final Office Action, page 4).

In essence, the Examiner appears to be ignoring our arguments wherein Saito fails to teach or suggest detecting groups of pulses having a carrier frequency, i.e., that Saito's device arguably merely detects separate groups of pulses with the clock regenerator 8 and detects a carrier frequency with the carrier detector 6; however, Saito fails to detect the combined feature e.g., groups of pulses having a carrier frequency.

Specifically, Saito merely discloses, "the clock pulse regenerator (8) and the carrier detector (6) respectively (emphasis added) detect a clock signal or pulse and a carrier signal out of the input modulated signal." (see Saito, col. 2, lines 28-31).

In other words, when reading Saito carefully, the usage of the term "respectively" is noticed. As such, Saito is reciting features that must be interpreted in the order presented. Applicants believe that the Examiner is missing this point, because the Examiner is improperly associating the clock signal/pulses with the carrier detector (6). Saito's carrier detector (6) is only detecting a carrier signal, not clock signals/pulses. And Saito's clock regenerator 8 is merely detecting a clock signal/pulse, not a group of pulses having a carrier frequency.

As such, applicants respectfully submit that the Examiner is still improperly interpreting Saito and is failing to qualify the appropriate device with the appropriate signal. Applicants submit that Saito, like APA, fails to teach or suggest detecting groups of pulses having a carrier frequency.

As such, for at least the reasons set forth above, we believe the claimed invention as set forth in independent claims 1 and 31 are distinguishable from the combination of APA and Saito.

Furthermore, claim 2 recites, *inter alia*, an offset circuit for adding an offset to the carrier detection level. The Examiner once again has failed to show how/where APA teaches such an offset circuit, as set forth in claim 2. Applicants respectfully submit that the Examiner has the burden of pointing out portions of each reference the Examiner has relied upon. "When a reference is complex or shows or describes inventions other than that claimed by the applicants,

the particular part relied on must be designated as nearly as practicable." See 37 C.F.R. §1.104(c)(2).

Applicants note that the Office Actions lack specific cites regarding APA which supports the alleged disclosures for the §103(a) claim rejection regarding the feature wherein there is an offset circuit for adding an offset to the carrier detection level. Applicants therefore must assume the portions of the reference the Examiner relied upon for the basis of this rejection. Applicants respectfully request that the Examiner provide full and complete explanation of these rejections so that Applicants may have an adequate opportunity to properly respond to the rejections. As for now, Applicants fail to see where/how such a feature is taught by APA.

Claims 31 and 34 are rejected on similar grounds as claims 1 and 2, respectively. As such, for at least the same reasons as noted above, respectively, APA and Saito fails to teach or suggest each and every feature as set forth in claims 31 and 34.

As such, for at least the reasons set forth above, applicants respectfully submit that the claimed invention as set forth in independent claims 1 and 31 are distinguishable from the combination of APA and Saito.

Applicant respectfully submits that neither APA nor Saito, taken singularly or in combination, (assuming these teachings may be combined, which applicant do not admit) teach or suggest detecting groups of pulses having a carrier frequency.

To establish a *prima facie* case of Obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

Applicants respectfully submit that not only does the references fail to teach or suggest each and every feature as set forth in the claimed invention, but that one of ordinary skill in the art would not have been motivated to combine/modify the teachings of APA with Saito because there is no teaching or suggestion in any of the references regarding how or why one would modify such systems to arrive at the claimed invention.

Applicants respectfully submit that independent claims 1 and 31 are allowable over the combination of APA and Saito for at least the reasons noted above.

As for each of the dependent claims not particularly discussed above, these claims are also allowable for at least the reasons set forth above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejection of claims 1, 2, 31 and 34 under 35 U.S.C. §103(a) is respectfully requested.

Conclusion

In view of the foregoing, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Carolyn T. Baumgardner (Reg. No. 41,345) at (703) 205-8000 **to schedule a further Personal Interview**.

CG/CTB/mpe

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment from or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, the extension of time fees.

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Respectfully submitted,

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